

BACKGROUND Information for June 22, 2011 FS Check-in

Situation Summary and Remaining FS Process Steps to be Completed

A Draft Feasibility Study (FS) Report is to be submitted to EPA by LWG on November 15, 2011. The draft report is to be a complete report, including all elements required by CERCLA and the NCP [CFR 300.430(e)].

As of mid-April 2011, for the FS the LWG has presented to EPA a variety of memoranda ("FS Tools") and some elements of technology screening for the site. Presuming the work has not been completed already, the LWG needs to go through a process that is roughly equivalent to the steps outlined below to complete the draft FS Report:

1. Establish Remedial Action Levels (RALs), and provide supporting information showing how the RALs were calculated and developed; the RALs should be presented for all the contaminants where we PRGs have been established
2. Complete the screening of technologies, identifying the process options associated with each technology, and the attributes and constraints for the use of each technology;
3. Define the term "Sediment Management Area" (SMA). The term has been used in several contexts thus far: as a general term for breaking down AOPCs and applying different technologies or a part of an AOPC that only involves some form of active remediation such as capping or dredging. It is presumed that the former definition will be used for the FS.
4. Identify, for each AOPC that exists, the SMA(s) that result. The rationale for identification of each SMA should be clearly identified and explained. The SMA identification should be done in concert with technology identification since the constraints and utility of various technologies will affect the logic for SMA formation.
5. Based on the SMA formation for each AOPC and using the General Response Actions (GRAs) as an organizational guide, combine technologies and their representative process options into potential remedial alternatives for each AOPC.
6. Evaluate the harbor-wide information and RALs and develop General Response Actions and associated technologies and process options for the rest of the harbor. In areas outside of the established AOPCs where action is required because of exceedance of RALs, additional SMAs may be established which are then used to focus additional potential remedial action development.
7. Assemble the GRAs and associated technologies, with representative process options, into preliminary remedial alternatives for all AOPCs at the site, using the SMAs to focus development. Also identify GRAs and associated technologies that would apply to harbor-

wide issues.

8. Since there are likely to be many potential preliminary remedial alternative combinations of technologies that might be assembled into remedial alternatives within AOPCs and across the site, a preliminary screening of preliminary remedial alternatives within AOPCs may be useful to reduce the number of preliminary remedial alternatives within AOPCs. This screening would be done based on relative effectiveness, implementability, and cost.
9. With a more manageable set of preliminary remedial alternatives, identify the features of the remaining preliminary remedial alternatives related to effectiveness, implementability, and cost. For example, the FS costing guidance suggests that at the screening level estimates with an expected accuracy range of -50% to +100% be developed and used for screening.
10. Screen the preliminary remedial alternatives based on those factors to reduce the set to a manageable number (expected to be five to seven sitewide alternatives) for analysis in the FS.
11. Identify the metrics related to the two threshold and five balancing NCP alternative evaluation criteria that will be used to support the FS individual and comparative evaluations of alternatives and analyze the performance of each alternative based on those measures. For examples, the threshold criteria of overall protection of human health and the environment involves achieving RALs and timeframes for achievement. Ideally metrics can be established and analyzed as either direct measures of performance or surrogate measures.
12. Perform an individual analysis of each alternative, documenting the performance of each alternative using the metrics that were identified previously to show how the each alternative performs.
13. Do a comparative analysis of the alternatives, contrasting the performance of the alternatives in each of the relevant criteria;
14. Summarize the findings and optionally recommend an alternative.
15. Provide technical information supporting all analyses performed. List is attached.

It is expected that to meet the schedule that activities 1 through 10 would be completed by June 22, and the LWG should be able to provide descriptions or examples of the metrics that it is planning to use for activity 11. This is not intended to be a complete or exhaustive list, and it is recognized that the LWG may not be assembling the alternatives in exactly the same manner as articulated above. The LWG

should be able to describe its approach to see if we can reach agreement on the approach and decisions made, and final list of alternatives selected for analysis.

With concurrence on the final remedial alternatives to be evaluated, the metrics and approach to be used for analyzing the alternatives, the final work needed to complete the draft FS should be able to proceed.

Other Information that Should be Provided

In order to facilitate common understanding of the assumptions and methods to be used in developing the FS, the following list represents desired information that the agencies would like to review with respect to the specific values used in developing SMAs and assessing FS alternatives. The purpose of this list is to identify the key elements of the FS where the agencies and LWG concur and also identify where additional discussion needs to occur. The assumptions can be caveated (preliminary, tentative, final or other descriptors as appropriate) and the list can be added to as necessary to ensure all key assumptions and points of discussion are framed. It is anticipated that this list will be a “living” document to carry the agencies and LWG through review, comment and approval of the FS.

The preliminary list of information to be provided (or referenced if covered by historical documents already presented to EPA) through the June 22 check-in (or a description of how/when the information would be provided, prior to or as part of the draft FS meeting) is as follows:

1. List of assumptions used to develop average and extreme climatic, hydraulic and hydrologic parameters
 - a. E.g. avg = period of record 1972-2009 for USGS Gage 14211720 WILLAMETTE RIVER AT PORTLAND, OR
 - b. Peak/duration = basis...with brief rationale why this extreme event makes sense...
2. Background – state for each relevant COC and describe method used
3. COC Source Term Assumptions
 - a. State average and extreme (if any) and/or trend used as basis for FS evaluations
 - b. State concentration, mass/time, and media (TSS or bulk water) for:
 - i. Upstream sources
 - ii. Stormwater
 - iii. Groundwater
 - c. Other
4. COCs and Indicator Chemicals
 - a. Complete list used for FS and basis for listing
 - b. For indicator chemicals provide physical/chemical parameters used as basis for grouping and tie to each applicable COC
5. PRGs and Remedial Action Levels
 - a. List and state rationale for each RAL on a risk/receptor basis
6. Provide a complete list of computer/analytic models used, along with version and references as applicable

- a. Provide a list of final calibration parameters selected
 - b. Provide brief narrative of calibration data, key parameters and sensitivity analysis as bullets
 - c. Present and discuss residual errors
 - d. Note any adjustments made to calibration since last model meeting(s) with Agencies
- 7. GIS-related data
 - a. Indicate bathymetry data used for model calibration and boundary conditions
 - b. Provide a shape file of points, lines or polygons that indicate the source terms used in the model(s)
 - i. Outfalls
 - ii. Groundwater recharge areas
 - iii. Nonpoint sources
 - iv. Tributaries
 - v. Provide shape file of key shear stresses at average, extreme, and other significant events used in the hydraulic/sediment transport model
 - vi. Provide a shape file of features significant to the FS analysis, e.g:
- 8. Docks, navigation channel, sensitive habitat, present land use, future land use, etc...
 - a. Provide updated shape file of AOPCs, SMAs, sub-SMAs, or response areas or alternative areas
- 9. Cost related assumptions
 - a. List the standardized assumptions that will be used for costs across all developed alternatives, e.g.:
 - i. 15% mobilization based on construction costs
 - ii. 30% contingency
 - iii. 7% discount rate
 - iv. Present worth based on 30, 50, or 100? year time frames
 - v. 10% Contractor overhead and profit
 - vi. 15% Engineering fee